

Title (en)

DIGITAL BEAMFORMING FOR PASSIVE DETECTION OF TARGET USING REFLECTED JAMMING ECHOES

Title (de)

DIGITALE STRAHLFORMUNG ZUR PASSIVEN DETEKTION EINES ZIELS UNTER VERWENDUNG REFLEKTIERTER STÖRECHOS

Title (fr)

FORMATION NUMERIQUE DE FAISCEAU EN DETECTION PASSIVE DES CIBLES EXPLOITANT L'ECHO DU SIGNAL DE BROUILLAGE

Publication

**EP 1423725 A4 20090617 (EN)**

Application

**EP 02773298 A 20020906**

Priority

- US 0228486 W 20020906
- US 94917001 A 20010907

Abstract (en)

[origin: WO03023437A2] A radar system and method for detecting and tracking a target of interest in the presence of interference, wherein the interference emits interfering signals, includes a receiver for receiving the interfering signals directly from the interference. The receiver also receives reflected signals, wherein the reflected signals are the interfering signals reflected by the target of interest. The interfering signals and the reflected signals are compared to detect the target of interest. In one embodiment, the reflected signals and the interfering are cross-correlated. The results of the cross-correlation are used to obtain range, position, and velocity information about the target of interest from a range/Doppler map.

IPC 1-7

**G01S 1/00**

IPC 8 full level

**G01S 7/28** (2006.01); **G01S 7/36** (2006.01); **G01S 3/74** (2006.01); **G01S 13/44** (2006.01)

CPC (source: EP US)

**G01S 7/2813** (2013.01 - EP US); **G01S 7/36** (2013.01 - EP US); **G01S 13/003** (2013.01 - EP US); **H04K 3/224** (2013.01 - EP US);  
**H04K 3/825** (2013.01 - EP US); **H04K 3/827** (2013.01 - EP US); **G01S 3/74** (2013.01 - EP US); **G01S 13/44** (2013.01 - EP US);  
**H04K 2203/12** (2013.01 - EP US); **H04K 2203/14** (2013.01 - EP US)

Citation (search report)

- [XY] US 5280294 A 19940118 - HAMMERQUIST EARL L [US]
- [XA] US 3987445 A 19761019 - FALES III DAVID
- [AP] JP 2001242243 A 20010907 - MITSUBISHI ELECTRIC CORP
- [XY] OGRODNIK R F: "Fusion techbroad area surveillance exploiting ambient signals via coherent techniques", MULTISENSOR FUSION AND INTEGRATION FOR INTELLIGENT SYSTEMS, 1994. IEEE INTERNATIONAL CONFERENCE ON MFI '94. LAS VEGAS, NV, USA 2-5 OCT. 1994, NEW YORK, NY, USA,IEEE, 2 October 1994 (1994-10-02), pages 421 - 429, XP010137967, ISBN: 978-0-7803-2072-7
- See references of WO 03023437A2

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

**WO 03023437 A2 20030320; WO 03023437 A3 20031224;** AU 2002336449 A1 20030324; EP 1423725 A2 20040602; EP 1423725 A4 20090617;  
US 2003071749 A1 20030417; US 6580392 B2 20030617

DOCDB simple family (application)

**US 0228486 W 20020906;** AU 2002336449 A 20020906; EP 02773298 A 20020906; US 94917001 A 20010907